Logistics Data Integration and PowerLOG 4/6/04

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Introduction

- **Logistics Management Information**
- **PowerLOG's role in DOD Logistics**
- **Summary**

“Get your facts first, and then you can distort them as much as you please”

Mark Twain

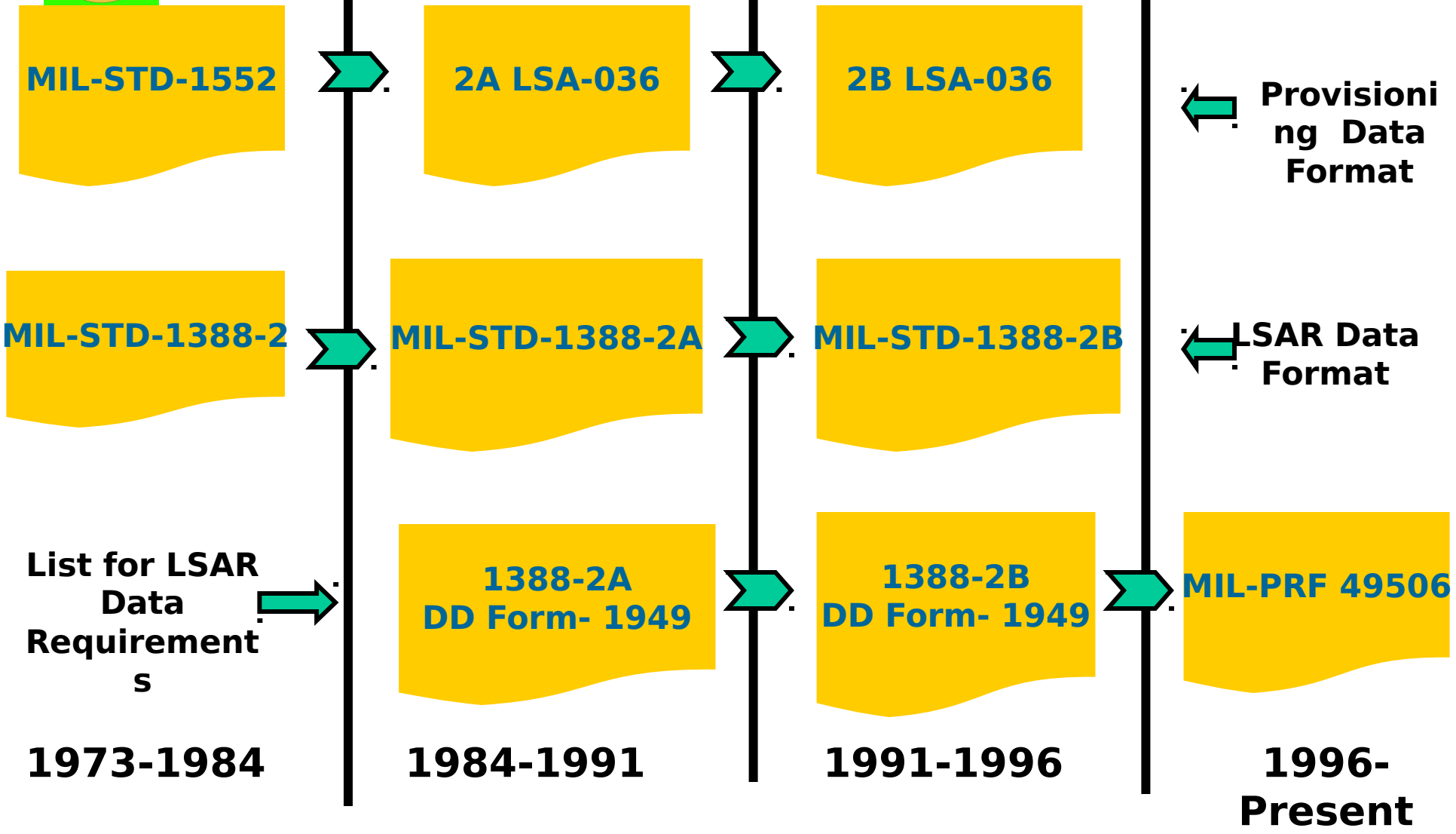
Data Integration

- **Logistics Support Analysis (LSA) (MIL-STD-1388-1) was developed to insure logistics was designed into weapon systems when they were developed.**
- **LSA Record (LSAR) (1388-2B) provided a standard data format integrating the following:**
  - **Reliability, Availability, and Maintainability,**
  - **Support Equipment**
  - **Item Identification (Cataloging, CAGE/Ref #/NSN)**
  - **Part Application (Provisioning, PLISN)**
  - **Operations and Maintenance Requirements**
  - **Transportability**
  - **Personnel**
  - **Task Analysis**
  - **Unit Under Test**
  - **Facility**
  - **Packaging**

I thought the 1388 Docs went away?

- **MIL-STD-1388-1A and –2B were eliminated.**
- **However,**
  - **Many programs still have 1388 requirements.**
  - **LSAR was required on all system developments prior to 1996!**
  - **Contractors know that Gov systems can load LSAR formats**
  - **Contractors have sunk cost in SW, Knowledge, or Training**
  - **No other standard format exists for passing this data.**
- **While the MIL-PRF-49506, Logistics Management Information (LMI) replaced the DD Form 1949 it did NOT provide data structure.**

History of LSAR/Provisioning Data



May 2003 LMI Utilization

Survey results of Army ACAT I & II systems

	NUMBER OF RESPONSES	NUMBER WITH LOGISTICS DATA DELIVERY RQMTS	NUMBER USING LMI SPEC	NUMBER USING LSAR STANDARD	NUMBER USING LSAR SYSTEM FOR DATA DELIVERY
TOTAL	**37**	**29**	**17**	**9**	**25**

- **25 of 29 OEMs provided Log Data in LSAR format!**

LMI UTILIZATION

- **Survey Insights:**
  - **LMI is being utilized to contract for log data**
  - **LMI has been tailored to acquire additional data**
  - **86% of those systems with Log Data Requirements used LSAR!**
  - **Some of those that did not use LSAR for data delivery, encountered data exchange problems**

What do we recommend for the future?

- **The Army – DA, LOGSA, LMP, AMC HQ have identified a deficiency in log data interchange. Need to Review impacts of cancellation of MIL-STD-1388 and follow with:**
  1. **Development of Standard containing data elements and their definitions for all Integrated Logistics Support (ILS) elements. (In process for LMP)**
  2. **Development of document interchange formats ex. Extensible Markup Language (XML), and Document Type Definition (DTD) standards.**
  3. **Use International initiatives such as Product Life Cycle Support (PLCS) ISO 10303 AP 239, AECMA S100D, etc.**

LOGSA's PowerLOG

- **Integrates the data in MIL-STD-1338-2B Format**
- **Satisfies Logistics Management Information Requirements (LMI/LSAR)**
- **Supports Modernization Efforts**
  - **Minimize Modifications To Existing Log Data Contracts**
  - **Provides XML tagged and PDF formatted outputs**
  - **Provides utilities/edits for legacy data cleansing**
- **Improve and Standardize OEM delivery Formats**
- **Expand Interoperability with the Other Services**

Who is Using PowerLOG and Why?

- **Current number of registered PowerLOG users 2300+**
- **OEMs**
  - **Develop an Integrated Logistics Database**
  - **Provide Integrated Logistics Support (ILS) /LSA /LMI Contract Deliverables**
- **Government**
  - **Program Management Offices and Other Government Agencies**
    - **Review Contractor Submittals (Edits, Reports, Ad Hoc Queries)**
    - **Send Data to Downstream Systems (PMR, IETM, FLIS, LMP, etc.)**
    - **Legacy Data Cleansing**

PowerLOG Successes (Just of few of approx 100 comments)

- "*PowerLOG gives us the ability to receive raw LSA data from contractors and create usable reports rather than have contractors generate reports each time that you need them. This saves time and money by not having to rely on contractors to deliver reports (especially if they are out of contract scope)*", Al Oswald, AMCOM
- *"In 25 years of being in the logistics arena, I have never encountered a group more professional and dedicated than those you have working in support of the powerlOG program. They could teach industry what customer service truly means"*, Kay Glancy, ILS Manager, Smiths Detection, Edgewood Md
- *"Contractor submitted data quality has increased."* H-P Phillips, TACOM

PowerLOG Successes

- PowerLOG allowed for *"easier and faster provisioning and technical manual development"* Michael Fletcher, Tobyhanna Army Depot
- *"We have significantly cut data entry/analysis time already (using powerLOG), and have greatly improved the speed at which we can bring others up to speed on the LSA process. This will enhance our ability to meet our cost and schedule for this and future programs....The software and helpdesk is leaps-and-bounds above the others I've used for LSA."* Suzanne C. Carrillo, Teledyne Brown Engineering, Global Missile Defense (GMD)- GBI Orbital Boost Vehicle program

PowerLOG Successes

- *"The powerLOG application has been identified as the potential basis for managing newly created and converted legacy system Technical Publications Data"* Dimension 4/PBM Associates,
- *"It provides a quick, easy to view LSAR data generated by other applications. It is easy to use and has a visibility that other applications lack."* Lou Rizzo, Lockheed Martin
- *"PowerLOG is THE tool for planning and executing all 1388/49506 logistics disciplines and "ilities"*....Tom Nichol, AAI

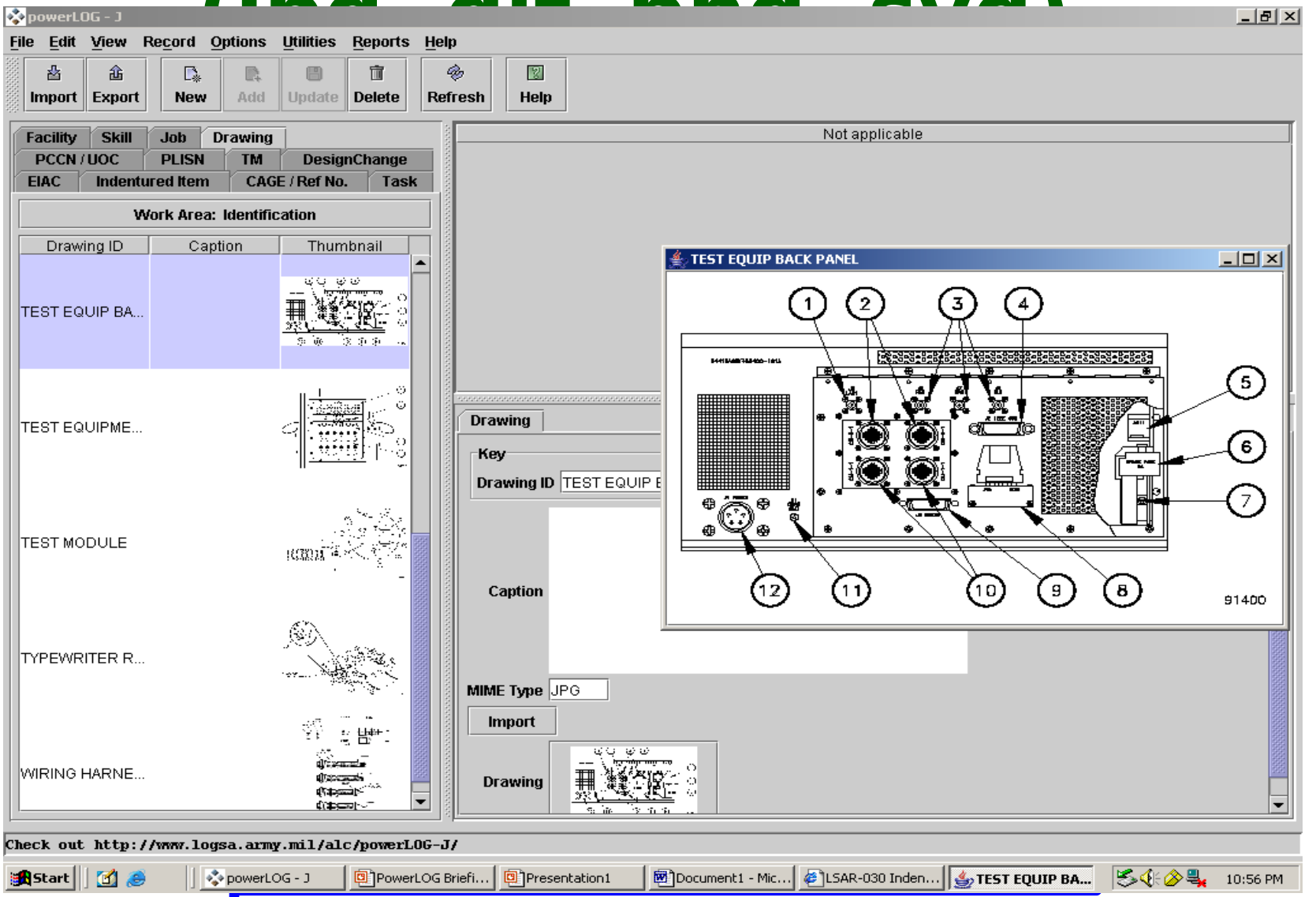
Reporting

- *Maintenance Allocation Chart (LSA-004)
- *Repair Parts and Special Tools List (LSA-030)
- Provisioning Technical Documentation (LSA-036)
- *Authorization List Item Summary (LSA-040)
- *Preventive Maintenance Checks and Services (LSA-033)
- Bill of Materials (LSA-080)
- And more!!!

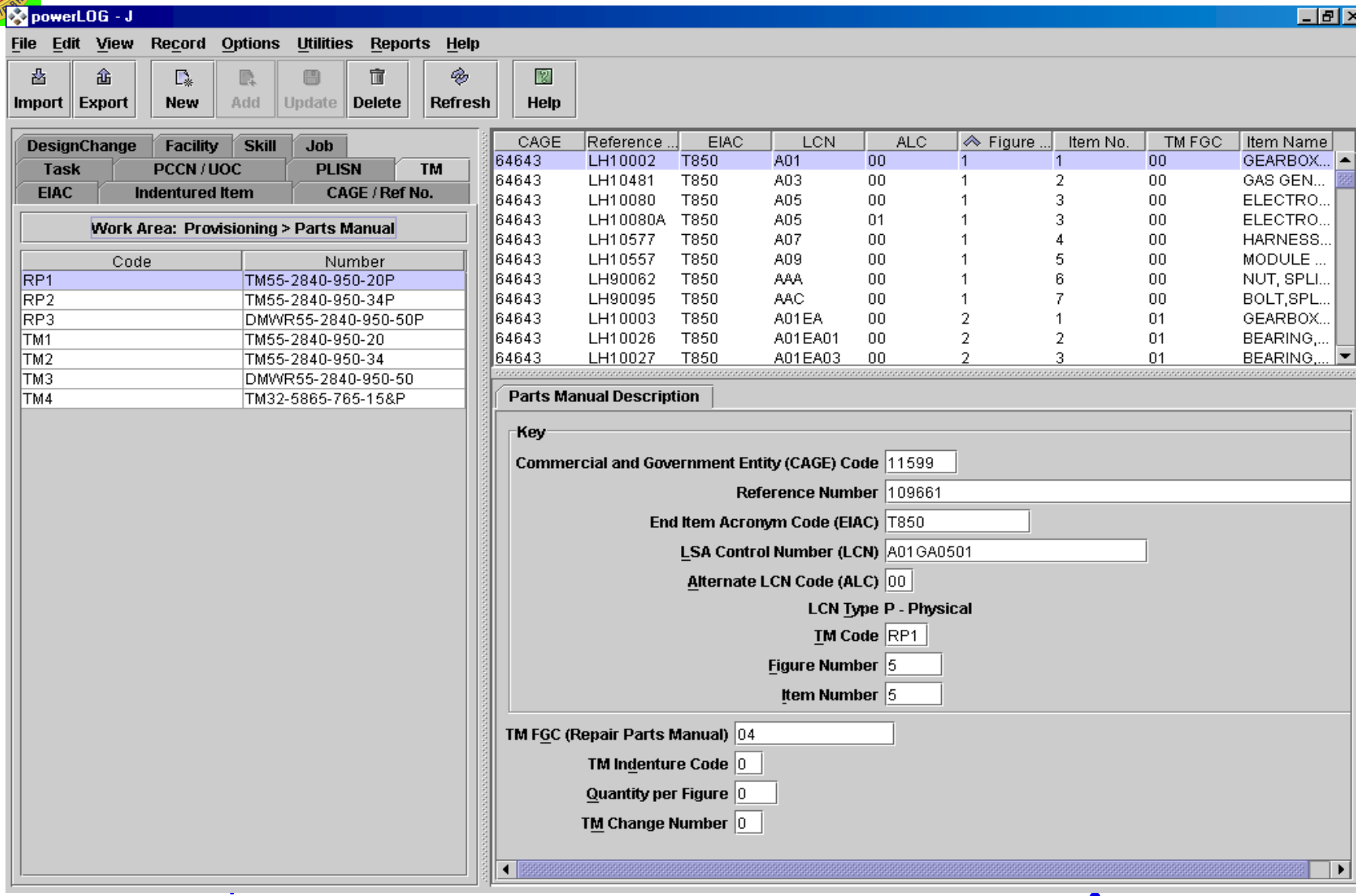
* MIL-STD-40051A Compliant Format

What's New – Drawings! (Beta 3)

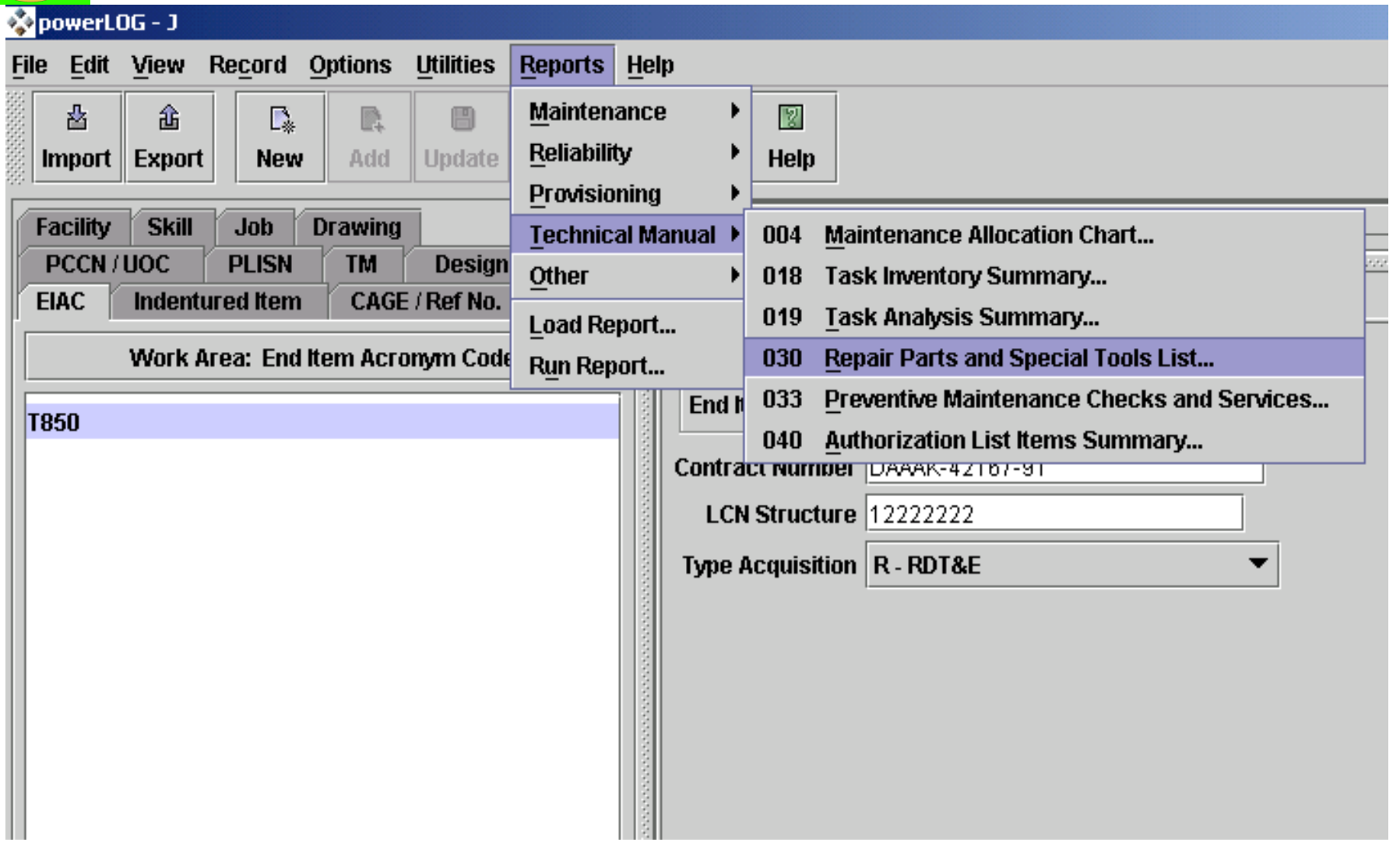
(jpg, gif, png, svg)



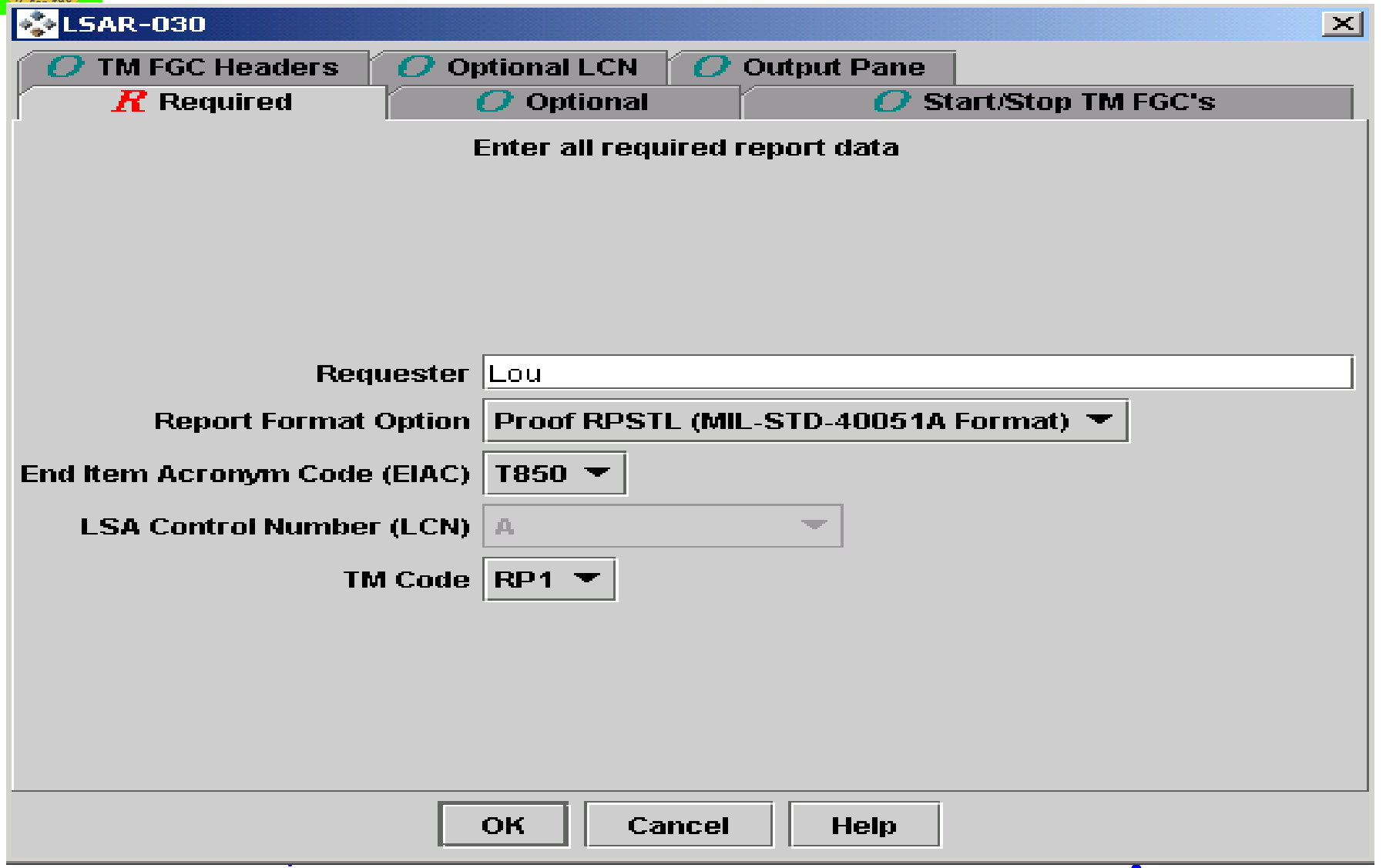
PowerLOG TM GUI


powerLOG - J
File Edit View Record Options Utilities Reports Help
Import Export New Add Update Delete Refresh Help
DesignChange Facility Skill Job
Task PCCN / UOC PLISN TM
EIAC Indentured Item CAGE / Ref No.
Work Area: Provisioning > Parts Manual
Code Number
RP1 TM55-2840-950-20P
RP2 TM55-2840-950-34P
RP3 DMWR55-2840-950-50P
TM1 TM55-2840-950-20
TM2 TM55-2840-950-34
TM3 DMWR55-2840-950-50
TM4 TM32-5865-765-15&P
CAGE Reference ... EIAC LCN ALC Figure ... Item No. TM FGC Item Name
64643 LH10002 T850 A01 00 1 1 00 GEARBOX...
64643 LH10481 T850 A03 00 1 2 00 GAS GEN...
64643 LH10080 T850 A05 00 1 3 00 ELECTRO...
64643 LH10080A T850 A05 01 1 3 00 ELECTRO...
64643 LH10577 T850 A07 00 1 4 00 HARNESS...
64643 LH10557 T850 A09 00 1 5 00 MODULE ...
64643 LH90062 T850 AAA 00 1 6 00 NUT, SPLI...
64643 LH90095 T850 AAC 00 1 7 00 BOLT,SPL...
64643 LH10003 T850 A01EA 00 2 1 01 GEARBOX...
64643 LH10026 T850 A01EA01 00 2 2 01 BEARING,...
64643 LH10027 T850 A01EA03 00 2 3 01 BEARING,...
Parts Manual Description
Key
Commercial and Government Entity (CAGE) Code 11599
Reference Number 109661
End Item Acronym Code (EIAC) T850
LSA Control Number (LCN) A01GA0501
Alternate LCN Code (ALC) 00
LCN Type P - Physical
TM Code RP1
Figure Number 5
Item Number 5
TM FGC (Repair Parts Manual) 04
TM Indenture Code 0
Quantity per Figure 0
TM Change Number 0

Report Selection



Report Wizard

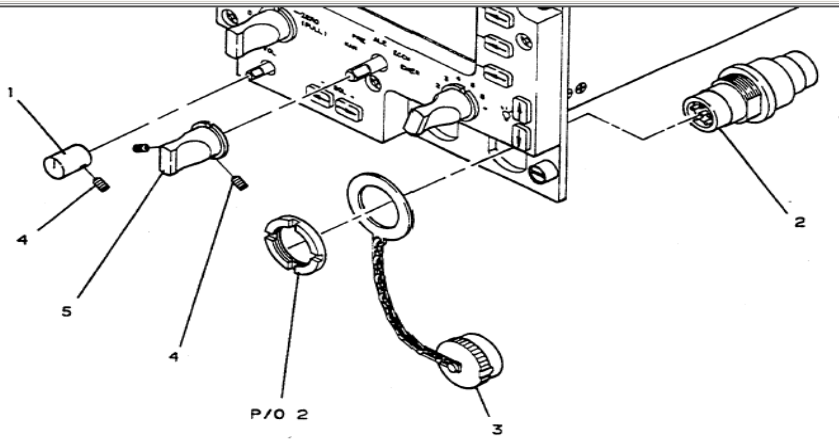


HTML Output

LSAR-030 Indentured Parts List Report Summary - Microsoft Internet Explorer provided by Provided By LOGSA

File Edit View Favorites Tools Help

Address C:\Program Files\USAMC LOGSA\powerLOGJem\report\lsar030.html



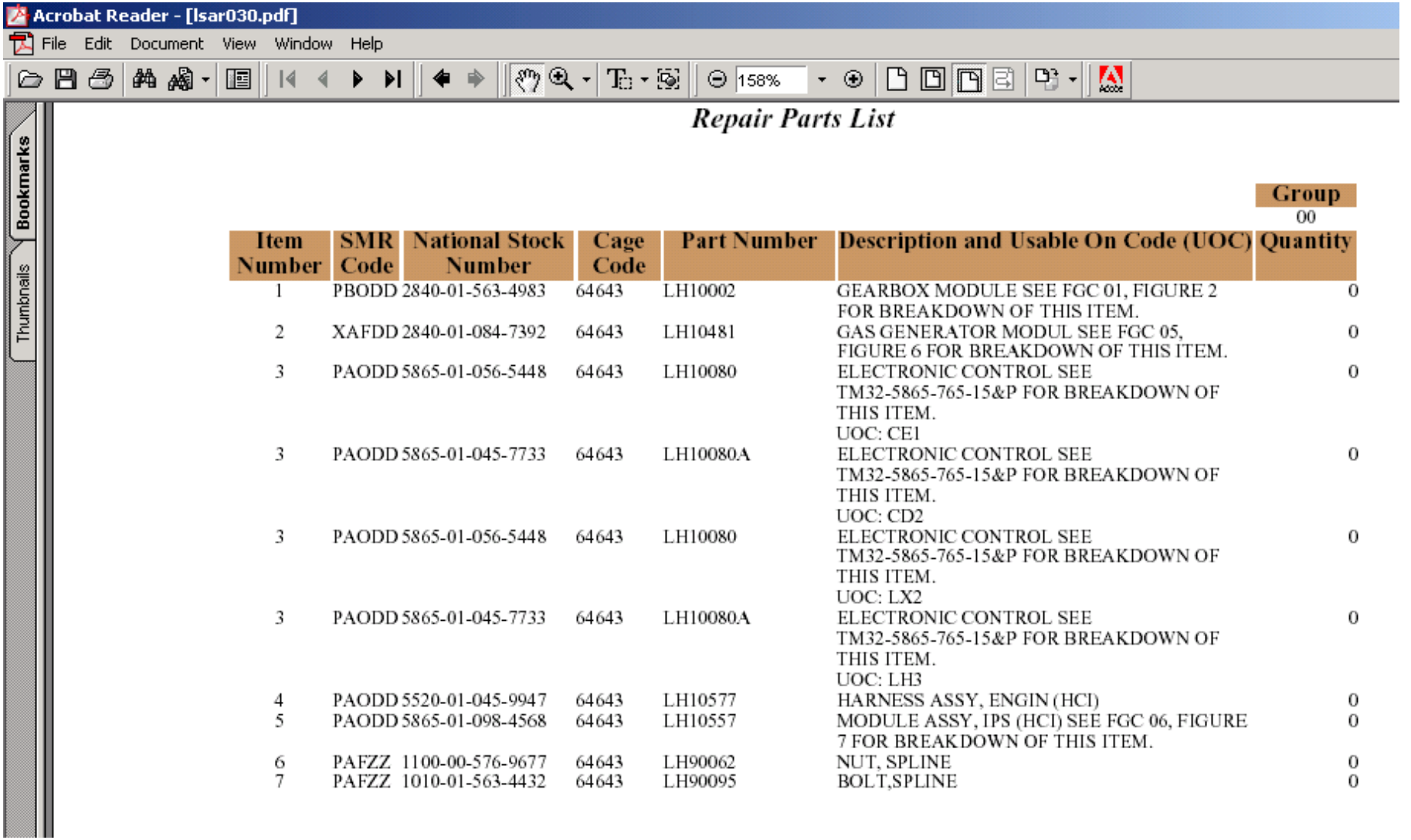
TPC-5547-011A

Item Number	SMR Code	National Stock Number	Cage Code	Part Number	Description and Usable On Code (UOC)	Quantity	Figure Number	FGC	PLCC	PCCN	PLISN
1	PAFZZ	6750-01-209-8765	11599	109845	SLEEVE,FILTER DRAIN	0001	3	02		H5T80B	AAAX
2	PAFZZ		11599	110409	KNOB,FILTER DRAIN	0001	3	02		H5T80B	AAAY
3	PAFZZ	2867-01-733-2876	11599	110419	VALVE,FILTER DRAIN	0001	3	02		H5T80B	AAAZ
4	PAFZZ		11599	110504	FILTER BOWL AND IND	0001	3	02		H5T80B	AABA
5	PAFZZ		11599	110386	RELIEF VALVE ASSEMB	0001	3	02		H5T80B	AABB
6	PAFZZ		11599	110387XE1	FILTER BYPASS VALVE	0001	3	02		H5T80B	AABC
7	PAFZZ	1240-01-883-4332	11599	110427	FILTER ELEMENT	0001	3	02		H5T80B	AABD
8	PAFDD	2865-01-238-9675	11599	110323	HOUSING AND INSERT	0001	3	02		H5T80B	AABF
9	PAFZZ	2865-01-765-5597	11599	110295	..HOUSING ASSY,MATCHE	0001	3	02		H5T80B	AABG
10	PAFZZ	3420-01-499-3401	11599	110518	..ROTOR AND SPACER AS	0001	3	02		H5T80B	AABH
11	PAFZZ	1260-00-569-9342	81343	AS3265-05	..WASHER,FLAT	0001	3	02		H5T80B	AABJ
12	PAODD		11599	110370XE1	METERING VALVE AND	0004	3	02		H5T80B	AABK
13	PAFDD	2310-00-672-3917	11599	109910	..STPR MTR & PNN ASSY SEE FGC 03, FIGURE 4 FOR BREAKDOWN BEGINNING WITH ITEM 1.	0001	3	02		H5T80B	AABL
14	PAFDD	2840-00-983-2216	11599	109912	..DC MTR & PINION ASS SEE FGC 03, FIGURE 4 FOR BREAKDOWN BEGINNING WITH ITEM 5.	0001	3	02		H5T80B	AABR
15	PAFZZ	8440-01-056-7984	64643	LH10026	BEARING,ROLLER	3	3	02		H5T80B	AAAL
16	PAFZZ	8440-01-055-4397	64643	LH10027	BEARING,BALL	6	3	02		H5T80B	AAAM
17	PAFZZ	3210-01-323-9845	96906	MS51923-187	PIN,SPRING	10	3	02		H5T80B	AABU

Done My Computer

Start powerLOG - J LSAR-030 Indentured Par... LSAR-030 Indentured ... sample images Microsoft PowerPoint - [P... 8:12 AM

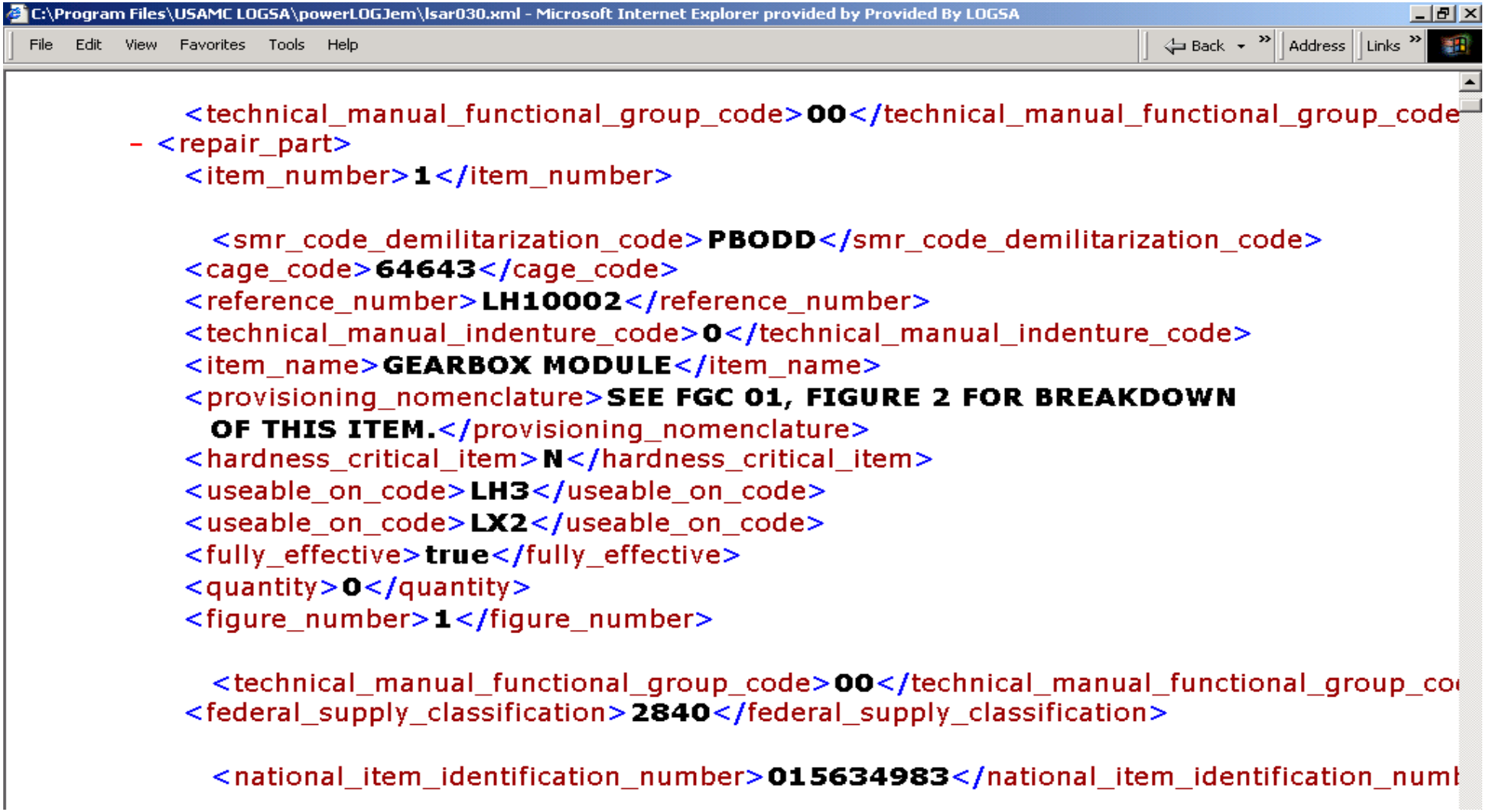
PDF Output Capabilities



Repair Parts List

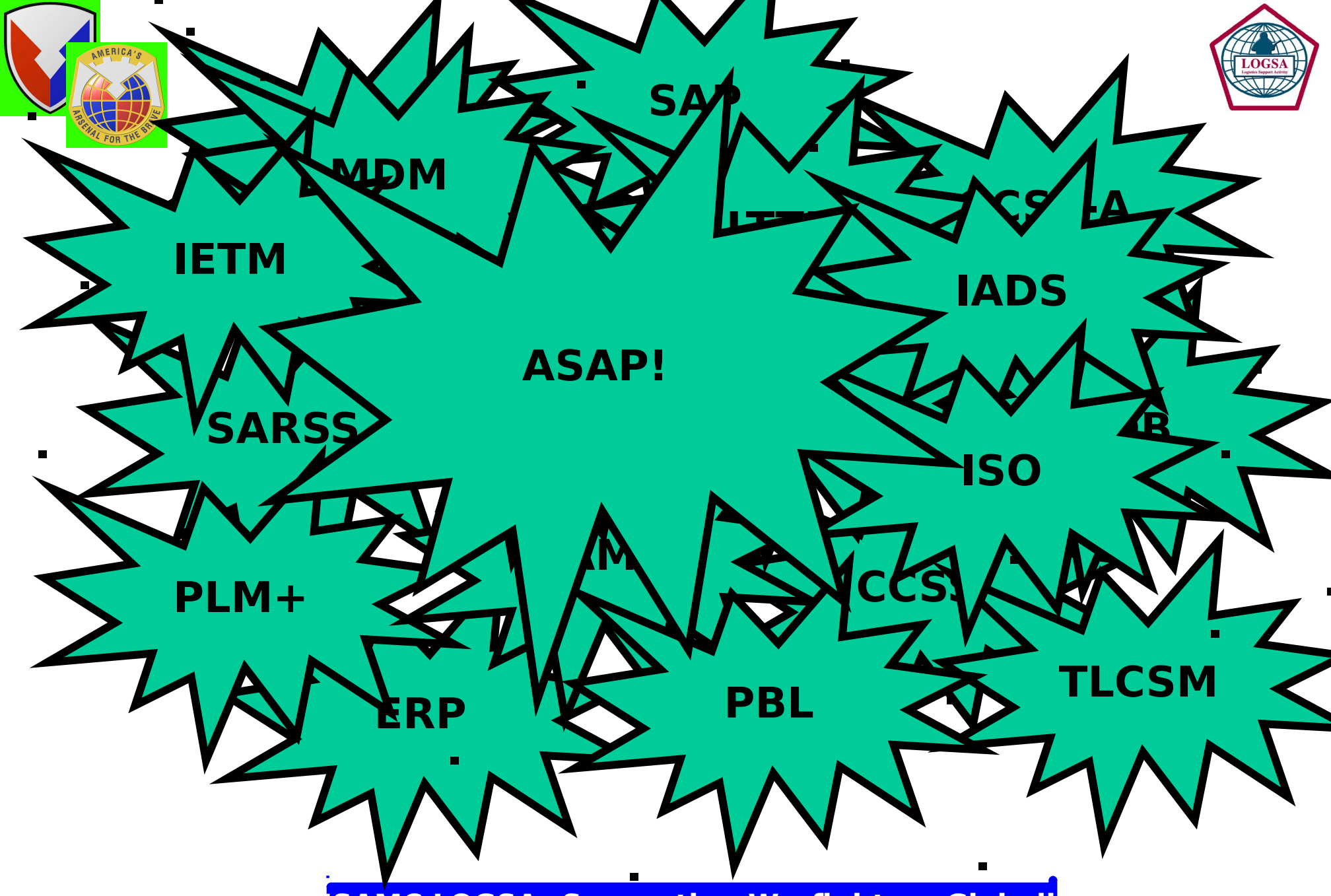
Item Number	SMR Code	National Stock Number	Cage Code	Part Number	Description and Usable On Code (UOC)	Group 00 Quantity
1	PBODD	2840-01-563-4983	64643	LH10002	GEARBOX MODULE SEE FGC 01, FIGURE 2 FOR BREAKDOWN OF THIS ITEM.	0
2	XAFDD	2840-01-084-7392	64643	LH10481	GAS GENERATOR MODUL SEE FGC 05, FIGURE 6 FOR BREAKDOWN OF THIS ITEM.	0
3	PAODD	5865-01-056-5448	64643	LH10080	ELECTRONIC CONTROL SEE TM32-5865-765-15&P FOR BREAKDOWN OF THIS ITEM. UOC: CE1	0
3	PAODD	5865-01-045-7733	64643	LH10080A	ELECTRONIC CONTROL SEE TM32-5865-765-15&P FOR BREAKDOWN OF THIS ITEM. UOC: CD2	0
3	PAODD	5865-01-056-5448	64643	LH10080	ELECTRONIC CONTROL SEE TM32-5865-765-15&P FOR BREAKDOWN OF THIS ITEM. UOC: LX2	0
3	PAODD	5865-01-045-7733	64643	LH10080A	ELECTRONIC CONTROL SEE TM32-5865-765-15&P FOR BREAKDOWN OF THIS ITEM. UOC: LH3	0
4	PAODD	5520-01-045-9947	64643	LH10577	HARNESS ASSY, ENGIN (HCI)	0
5	PAODD	5865-01-098-4568	64643	LH10557	MODULE ASSY, IPS (HCI) SEE FGC 06, FIGURE 7 FOR BREAKDOWN OF THIS ITEM.	0
6	PAFZZ	1100-00-576-9677	64643	LH90062	NUT, SPLINE	0
7	PAFZZ	1010-01-563-4432	64643	LH90095	BOLT,SPLINE	0

XML Output Capabilities

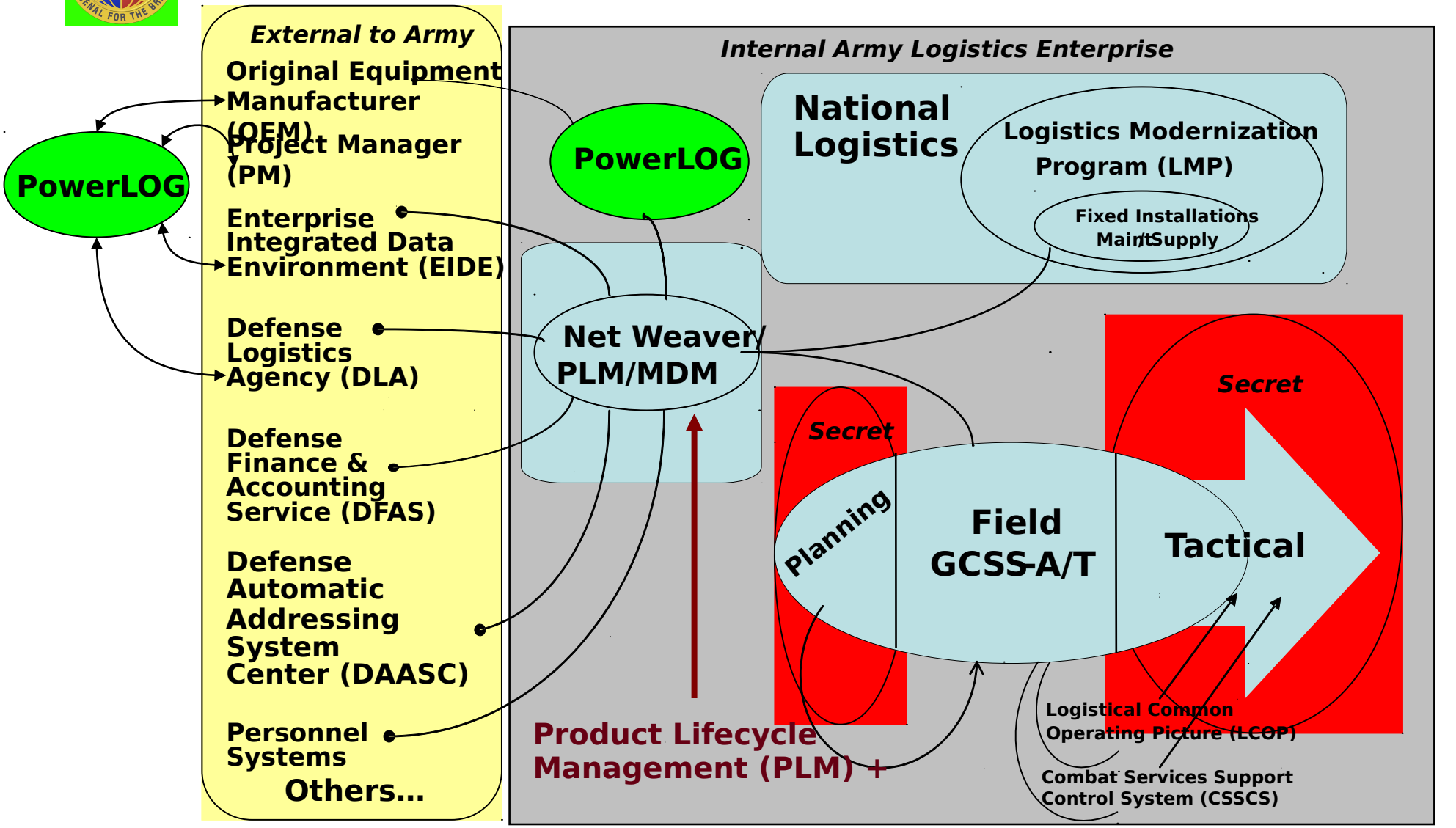


“The Future Ain’t What it Used to Be”

Yogi Berra


MDM
IETM
IADS
ASAP!
SARSS
ISO
PLM+
ERP
PBL
TLCSM

High-Level Logistics Architecture



LOGSA TM Initiatives

- **Add new import capability to allow conversion of MIL-STD-2361, and CECOM's variant to powerLOG* (PBM Associates)**
  - **Focusing on Parts, Troubleshooting, & Maintenance work packages**
- **Create transformation between powerLOG's XML tags and MIL-STD-2361D tags (DynaMark Solutions)**
- **Utilize powerLOG's RPSTL, MAC, and other TM reporting capabilities to**
  - **provide quality source data**
  - **enhance updates to pubs after data updates**

- ***Not all work packages are included in the scope of this effort**

Conclusion

- **PowerLOG is playing a role in the DOD Log community**
  - **PowerLOG is supporting development of integrated Log data**
  - **PowerLOG supports conversion of legacy data**
  - **PowerLOG is an open source system created in Java and utilizes XML, HTML, and PDF outputs.**
  - **IETM Authoring System can use outputs from PowerLOG as source data to improve quality and timeless of LMI data.**

Contact and Download Info

- **PowerLOG downloads are free and available at:**
  - **powerLOG – J**
    - **Latest Version Beta 5**
    - **www.logsa.army.mil/alc/powerLOG-J**
  - **powerLOG 2000 (stand alone MS Windows version)**
    - **Latest Version 2.6.7**
    - **www.logsa.army.mil/alc/powerlog**
- **Project Lead, Jay Lasher**
  - **(256) 955-9925, DSN 645-9925**
  - **george.lasher@us.army.mil**
- **My Contact Information**
  - **(256) 955-9866, DSN 645-9866**
  - **louis.sciaroni@us.army.mil**

Backup

Acquisition Projects of Other Agencies

- **NAVY**
  - EA-6B Prowler, NVD, ICAPIII, F-18 Hornet
  - CH/MH-53E
  - INGATS, NSIPS, DIMHRS, NOW, NRAMS, etc.
  - 1. Joint High Speed Vessel (JHSV)2. Guided Parafoil Aerial Delivery Sys (GPADS)3. Broad Area, Unmanned, Responsive Re-supply Operation (BURRO)4. Ground Log C2 (GLC2)5. Dust Abatement Technologies 6. Portable ROWPU (PROWPU)
  - Waterborne Craft - LSV & LCU 2000, LSV 7
  - 52Mod,K Band
- **AIR FORCE**
  - Joint Strike Fighter, C- 5 Modernization, C-17, C-131 Gunship
- **MARINE CORPS**
  - USMC C4I, V-22
- **National Missile Defense**
  - Ground Missile Defense
- **NASA**
  - Space Station, 2nd Generation Reusable Launch Vehicle
- **Other Government Agencies**
  - FAA and Coast Guard

Acquisition Project Offices

PowerLOG is used by ALL DOD Services and Other Agencies

- **Army**
  - PM Soldier, Land Warrior
  - FMTV, Patriot Launcher
  - Stryker, Brigade Combat Team
  - Light Weight 155
  - Apache Longbow and Comanche Fire Control Radar
  - AES, ACIS, Apache
  - CH-47D Chinook, CH-47F Improve Chinook, AH-64A Apache, AH-64D Longbow, OH-58D Kiowa Warrior, Blackhawk
  - CBU Deployment/Support
  - H60, Contractor to PM10 Indy
  - CCMS Project Office, Javelin,
  - CECOM C-11746
  - THAAD
  - MINE Protective Clearance Vehicle
  - High Mobility Artillery Rocket System
  - M1A1, Bradley, HMMWV